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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,877	03/26/2004	Stephen S. Hancock	TIR 2675B	9840
7590 09/09/2005			EXAMINER	
WILLIAM O'DRISCOLL THE TRANE COMPANY PATENT DEPARTMENT - 12-1 3600 PAMMEL CREEK ROAD LA CROSSE, WI 54601			NGUYEN, NINH H	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 09/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,877

Applicant(s)

HANCOCK, STEPHEN S.

Examiner

Ninh H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/16/04, 12/27/04</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 15 is objected to because of the following informalities: the claim should be dependent on claim 11 rather than claim 1. Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-10, 11-15, and 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 10-14 recites the limitation of “providing for distribution of airflow entering said inlet opening of said blower with respect to said axis along flow streamlines which extend to said inlet opening over at least a major portion of said inlet opening”.

Claim 11, lines 11-16 recites the limitation of “providing a flow for air flowing into said cabinet and into one of said air inlet openings of said blower which distributes airflow entering said at least one inlet opening of said blower with respect to said axis along flow streamlines which extend over at least a major portion of said at least one inlet opening”.

Claim 16, lines 11-15 recites the limitation of “providing a flow path for air flowing into said cabinet and into said air inlet openings of said blower whereby airflow entering said inlet openings of said blower housing is distributed over at least a major portion of said air inlet openings of said blower housing”.

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It is unclear as to how much of a portion of the inlet opening is considered a major portion. Without a clear definition of "a major portion" of the inlet opening, it is impossible to distinguish the instant invention from the prior art.

Claims 2-10, 12-15, and 17-19 are rejected as being dependent on claims 1, 11, and 16, respectively.

Note: any portion of a blower inlet opening spanning more than a zero degree arc is considered a major portion of the inlet opening in this Office Action.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-6, 8-12, and 15, as far as they are definite, are rejected under 35 U.S.C. 102(b) as being anticipated by Sullivan (5,042,269).

Sullivan discloses a combination (Figs. 1-18) comprising a cabinet inherently including an air inlet opening and an air discharge opening (Fig. 2), a centrifugal airhandling blower disposed in the cabinet, the blower including a blower housing having opposed sidewalls 57, 58 (Figs. 3, 4), portions of which extend axially with respect to an axis of rotation of an impeller of the blower in opposite directions toward opposed walls of the cabinet (Fig. 4) providing a flow path for air flowing into the cabinet and into at least one air inlet opening of the blower and providing for distribution of airflow entering the inlet opening of the blower with respect to the axis along flow streamlines which extend to the inlet opening over at least a portion of the inlet opening (Figs. 3, 4).

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wherein the cabinet is substantially rectangular in shape (Fig. 17) and includes opposed sidewalls disposed adjacent and spaced from the opposed sidewalls of the blower housing, respectively, and the cabinet includes at least one wall extending transversely to the sidewalls of the cabinet and disposed directly adjacent a portion of an end wall of the blower housing (Fig. 2);

wherein the blower includes an air discharge opening formed by the blower housing and oriented for discharging air from the blower toward an air discharge opening of the cabinet (Fig. 11);

wherein the cabinet includes a heat exchanger 12 disposed directly adjacent a portion of an end wall of the blower housing whereby at least one axially extending portion of each of the sidewalls of the blower housing is disposed adjacent the heat exchanger and such as to force airflow toward opposed inlet openings in the blower housing to be diverted around the at least one axially extending portion of each of the sidewalls of the blower housing, respectively (Fig. 2);

wherein at least one axially extending portion of each of the sidewalls of the blower housing disposed directly adjacent a wall of the cabinet (Figs. 2, 10);

wherein each of the sidewalls of the blower housing includes at least one axially extending portion configured in combination with an end wall of the blower housing to inherently provide a substantially continuously increasing cross-section flow area for throughput air of the blower housing (Fig. 3), the axially extending sidewall portions being disposed adjacent an end wall portion of the blower housing;

wherein the blower housing is formed of two opposed housing parts joined along a parting line which is substantially normal to the axis (Fig. 4);

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wherein the housing parts are releasably connected to each other by spaced apart clips (Fig. 4), the clips being cooperable with bosses formed on the housing parts, respectively, for securing the housing parts to each other; and

wherein the blower is supported in the cabinet on opposed rails 20 and 23 (Figs. 3, 4), the rail cooperating with a flange formed on the blower for suspending the blower in the cabinet.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-6, 8, 9, 11, 12, 15-17, and 19, as far as they are definite, are is rejected under 35 U.S.C. 103(a) as being unpatentable over VanderVaart (4,420,034) in view of Sullivan (5,474,422).

VanderVaart discloses a combination (Figs. 1-4) comprising a cabinet including an air inlet opening and an air discharge opening (Fig. 4), a centrifugal, motor driven airhandling blower 80 disposed in the cabinet, the blower including a blower housing having opposed sidewalls, each sidewall has an inlet opening (Fig. 1), the sidewalls providing a flow path for air flowing into the cabinet and into at least one air inlet opening of the blower and providing for distribution of airflow entering the inlet opening of the blower with respect to the axis along flow streamlines which extend to the inlet opening over at least a portion of the inlet opening,

wherein the cabinet is substantially rectangular in shape (Fig. 2) and includes opposed sidewalls disposed adjacent and spaced from the opposed sidewalls of the blower housing, respectively, and the cabinet includes at least one wall extending transversely to the sidewalls of the cabinet and disposed directly adjacent a portion of an end wall of the blower housing (Fig. 1);

wherein the blower includes an air discharge opening formed by the blower housing and oriented for discharging air from the blower toward an air discharge opening of the cabinet (Fig. 4).

However, VanderVaart does not disclose the blower housing having opposed sidewalls portions of which extend axially with respect to an axis of rotation of an impeller of the blower in opposite directions toward opposed walls of the cabinet providing a flow path for air flowing into the cabinet and into at least one air inlet opening of the blower and providing for distribution of airflow entering the inlet opening of the blower with respect to the axis along flow streamlines which extend to the inlet opening over at least a portion of the inlet opening,

wherein the blower housing is formed of two opposed housing parts joined along a parting line which is substantially normal to the axis.

wherein the housing parts are releasably connected to each other by spaced apart clips, the clips being cooperable with bosses formed on the housing parts, respectively, for securing the housing parts to each other.

Sullivan teaches a centrifugal blower (Figs. 1-12) having a blower housing comprising opposed sidewalls (Fig. 1) portions 76 of which extend axially with respect to an axis of rotation of an impeller of the blower in opposite directions,

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wherein the blower housing is formed of two opposed housing parts joined along a parting line which is substantially normal to the axis (Fig. 1).

wherein the housing parts are releasably connected to each other by spaced apart clips 15, the clips being cooperable with bosses formed on the housing parts, respectively, for securing the housing parts to each other (Fig. 1).

It would have been obvious to a person having ordinary skill in the art at the time the invention was made, to make the combination of VanderVaart with the blower housing of Sullivan for the purpose of providing a blower housing which is highly efficient and quiet (Sullivan col. 2, lines 22-23).

Regarding claim 4-6, 8, 9, 11, 12, 15-17, and 19, VanderVaart in view of Sullivan show the cabinet includes a heat exchanger 60 disposed directly adjacent a portion of an end wall of the blower housing (Figs. 3, 4) whereby at least one axially extending portion of each of the sidewalls of the blower housing is disposed adjacent the heat exchanger and such as to force airflow toward opposed inlet openings in the blower housing to be diverted around the at least one axially extending portion of each of the sidewalls of the blower housing, respectively (Figs. 3, 4);

wherein at least one axially extending portion of each of the sidewalls of the blower housing disposed directly adjacent a wall of the cabinet (Fig. 1);

wherein each of the sidewalls of the blower housing includes at least one axially extending portion configured in combination with an end wall of the blower housing (Figs. 1, 2) to provide a substantially continuously increasing cross-section flow area for through put air of

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the blower housing, the axially extending sidewall portions being disposed adjacent an end wall portion of the blower housing (Fig. 1).

Allowable Subject Matter

6. Claims 7, 13, 14, and 18 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Prior Art

The prior art made of record but not relied upon is considered pertinent to applicant's disclosure and consists of 1 patent.

Landingham et al. (3,340,788) is cited to show a blower and cabinet combination.

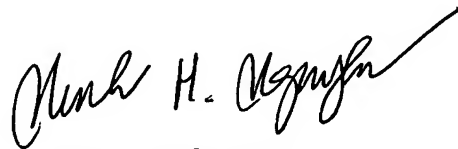
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Ninh Nguyen whose telephone number is (571) 272-4823. The examiner can be normally reached on Monday-Friday from 7:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look, can be reached at (571) 272-4820. The fax number for this group is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, please go to <http://pair-direct.uspto.gov> or contact the Electronic Business center (EBC) at 866-217-9197 (toll-free).



NINH H. NGUYEN
PRIMARY EXAMINER

Nhn
September 6, 2005